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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,919	04/12/2007	Jan Hall	NOBELB.243NP	9222

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EXAMINER

MAI, HAO D

ART UNIT	PAPER NUMBER
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3732

NOTIFICATION DATE	DELIVERY MODE
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03/02/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
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Office Action Summary	Application No. 10/582,919	Applicant(s) HALL, JAN	
	Examiner HAO D. MAI	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-10,12,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-10,12,14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/08/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1-4, 7-10, 12, and 14, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 1 recites the limitation "the surface" (line 5), which lacks antecedent basis.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-4, 7-10, 12, and 14-15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cottrell (2004/0142304 A1) in view of Hansson et al. (5,588,838).**

Cottrell discloses a dental implant 40 capable of being inserted into a hole formed in the jaw bone and overlying soft tissue, the dental implant 40 comprising: an upper portion 50 capable of being placed against an upper edge 58 of the jaw bone 42 (Fig. 6). The upper portion 50 comprises at least one groove 46b which extends all around the surface and which extends substantially in a cross section substantially at right angles (i.e. perpendicular) to the longitudinal axis 64 of the implant (Fig. 10; paragraph 57). Cottrell discloses the grooves 46b

Art Unit: 3732

being micro grooves, but fail to disclose specific dimensions of such micro grooves as claimed. Hansson et al. disclose a dental implant having micro threads/grooves at the upper portion of the implant, wherein each thread/groove has a height/depth of between 0.02 and 0.20 mm and a width (crest to crest) of approximately twice the height of the thread/groove (abstract). Such dimension is converted to be 20 – 200 μm in depth and 40 – 400 μm in width, which overlap the claimed ranges of depth and width. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cottrell by making the micro groove having depth and width within the ranges as taught by Hansson in order to optimize osseointegration of the implant to the bone tissue. Furthermore, such modification would have been well within the skill of an artisan since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

As to claim 2 and 4-5, dental implant's threads or grooves are generally well known to have cup, semi-circular, hyperbola, or semi-elliptical shapes, or rectangular cross section with rounded corners. Nonetheless, such shapes would have been obvious to one having ordinary skill in the art at the time the invention was made since it is merely a matter of design choice well within the skill of an artisan in order to obtain optimum results. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). See *MPEP* § 2144.04. **As to claim 3**, Cottrell in Figure 12 shows each groove having an arc-shape that follows a corresponding arc-shaped jaw bone (Fig. 12; paragraph 57). **As to claims 7-8**, note that these claims recite functional claim language as opposed to structural limitations; wherein Cottrell's implant is capable of performing such claimed functions. **As to claims 9-10**, Cottrell shows the groove 46b is located at an upper part of the upper portion and the implant including other coordinating grooves. **As to claims 12 and**

Art Unit: 3732

14, the claimed range of depth of about 70 μm and width of about 110 μm is within the ranges of 20 – 200 μm and 40 - 400 μm , respectively, as disclosed by Hansson.

As to claim 15, the method of providing the dental implant and installing the implant into a jaw bone of a patient is naturally carried out when using the dental implant as disclosed by Cottrell in view of Hansson.

Response to Arguments

5. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. Applicant's remarks are held to be responded to in the new ground(s) of rejection as detailed above.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication and earlier communication from the examiner should be directed to HAO D. MAI whose telephone number is 571-272-4709. The

Art Unit: 3732

examiner can normally be reached on Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached at 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hao D Mai/

Examiner, Art Unit 3732

/Cris L. Rodriguez/

Supervisory Patent Examiner, Art Unit 3732